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UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
FOREST INSECT INVESTIGATIONS

Project | Date April 8, 1947 | Author

TITLE

FOREST INSECT SURVEY REPORT

WEST LASSEN NATIONAL FOREST AND ADJACENT PRIVATE TIMBER LANDS

SEASON OF 1946

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SUBJECT—

INDEX NO.—

U. S. GOVERNMENT PRINTING OFFICE 16—47272-1

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April 8, 1947

Forest Insect Survey Report

THE WEST LASSEN NATIONAL FOREST AND ADJACENT PRIVATE TIMBER LANDS

Season of 1946

Introduction

Insect loss surveys on the West Lassen have usually been conducted on a general reconnaissance basis and have been made irregularly during the past ten years. The 1946 survey was of a more comprehensive nature and included considerable ground sampling as well as a general reconnaissance. This survey was carried on by R. C. Hall of the Berkeley Forest Insect Laboratory, assisted by H. E. Branagh, Assistant Ranger from the Shasta National Forest. Assistance on the survey was also furnished by L. D. Wambold, forester for the Diamond Match Company, W. H. Reed, Forester for the Collins Pine Company, and by personnel from the California State Division of Forestry. The survey was carried on during late October and early November 1946. During this period a total of 55 miles of road strips were run with a total net ground sample of 2,096 acres. The locationsof these samples are shown in red on the attached map. Road strips 1 through 9 were samples where each infested tree was measured, mapped, numbered, and data were taken on the insects responsible for death on an area 2½ chains on each side of the road. Road strips 10 through 13 were samples on which the infested trees were mapped and counted but not numbered or blazed. Diameters on these trees were estimated.

This map also shows the timbered areas of the Lassen National Forest by timber types and working circles. The working circles are tentative ones established by the Regional Office of the U. S. Forest Service for the purpose of assembling re-appraisal data. Working circles 76 and 77 represent the Burney Area and are covered by a separate survey report by J. W. Bongberg and R. C. Hall. Working circle 78 represents the East Lassen, and this is covered by a separate report by P. C. Johnson. Working circles 75, 79A and 79B and 80 represent the West Lassen and are those considered in this report. Except for a small area of west side pine along the western fringe of these working circles, the timber type is predominately mixed conifer.

History of Past Losses

Past timber losses caused by insects on the West Lassen are believed to have followed the general pattern of losses in westside stands. There was an epidemic in the mixed conifer type in 1938 that maintained a relatively high level for two years and then subsided to an endemic status and has remained at that level since that time. During this epidemic heavy losses were sustained in both sugar and ponderosa pine.

Estimated 1946 Losses

With a few exceptions, losses for the 1946 season on the West Lassen are endemic but show definite tendency of being on the increase. The exceptions to the

general rule are found in a few local areas in the westside pine type; a local epidemic in Douglas fir exists along Deer Creek; and some tendency for an epidemic was noted on the Kimshew burn in working circle 79B. As the 1946 losses appear to be quite uniform within timber types, they will be discussed on that basis.

West Side Pine Type

This type is restricted to a narrow border along the west fringe of working circles 75, 79A and 79B. Losses are endemic in this type except in the vicinity of recent cutting areas. In the latter areas losses caused by the California five-spined engraver beetle, Ips confusus, are locally epidemic. Small group losses in reserve stands from this insect are found around Round Mountain, Montgomery Creek and Inwood in working circle 75. These areas, however, are usually limited to a few acres and do not greatly affect the total losses in the type as a whole. It is estimated that ponderosa pine loss in this type will be about 40 board feet per acre for the 1946 season.

Mixed Conifer Type

Losses for 1946 in this type are endemic except for a small area along Deer Creek in working circle 80 where epidemic losses are occurring in Douglas fir and to an area of several hundred acres on the Kimshew Burn where some grouping tendency was observed in trees injured by the fire of 1945. There follows an estimate of losses by species.

Ponderosa and Jeffrey Pine. Losses in these two species caused by the western pine beetle, Dendroctonus brevicomis, in the former and the Jeffrey pine beetle, Dendroctonus jeffreyi in the latter, and by the California five-spined engraver beetle in both species, are expected to average about 70 board feet per acre for the 1946 season. Losses in both these species are principally confined to single trees in advanced stages of decadence and no grouping tendency was observed except on the Kimshew Burn where several small groups of ponderosa pine were found to be infested.

White Fir. Losses in white fir caused by the fir engraver beetle, Scolytus ventralis are expected to average about 60 board feet per acre for the 1946 season. A high percentage of this loss is occurring in single overmature white fir in advanced stages of decadence and usually in individuals with a high percentage of cull.

Douglas Fir. Losses in Douglas fir are endemic on the West Lassen except for a local area of epidemic losses on about 2,000 acres along Deer Creek in working circle 80. In this local area losses in Douglas fir caused by the Douglas fir beetle, Dendroctonus pseudotsugae, are showing definite grouping tendencies with groups of more than five trees commonly observed. Many of the trees killed in these groups appear to be very thrifty. In the balance of the West Lassen practically all of the loss in Douglas fir appears to be caused by the fir flatheaded borer, Melanophila drummondi. Such losses as were observed were predominately in large trees in advanced stages of decadence. It is estimated that losses in this species will be about 25 board feet per acre for 1946.

Sugar Pine. Losses in sugar pine caused by the mountain pine beetle are low endemic and are estimated to be about 20 board feet per acre for the 1946 season for the area as a whole.

All Species. Losses in all species for the West Lassen are expected to average about 175 board feet per acre for the 1946 season.

Recommendations

The only area on the West Lassen where control appears to be justified is in the local epidemic area in Douglas fir along Deer Creek. If any funds are available for control purposes, it is suggested that this area be considered for control action on an experimental basis. It is suggested that the Kimshew Burn area be carefully watched again next year for any evidence of aggressive beetle activity.

Timber Losses from Cruised Road Strips on West Lassen

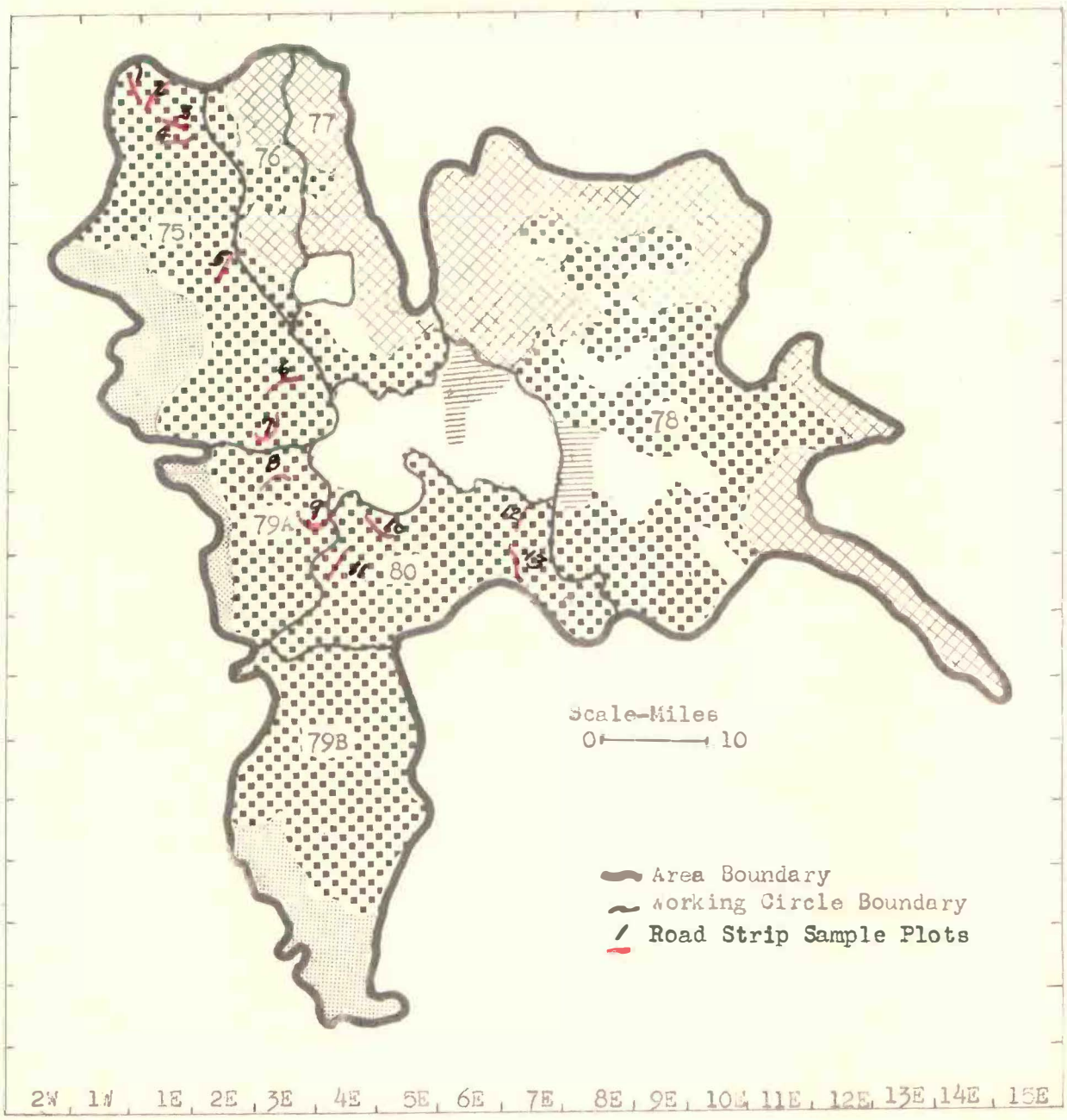
Road Strip	No. Acres	Total Cruised Loss - Bd. Ft. W.F.	S.P.	D.F.	P.P.	All Species	Bd. Ft. per Acre
1	136	4,970	-	2,880	4,730	12,580	93
2	128	7,970	-	-	6,210	14,180	111
3	120	6,800	-	4,700	3,750	15,250	127
4	96	5,290	-	-	5,310	10,600	111
5	160	16,140	9,550	-	6,210	31,900	199
6	216	18,230	10,260	-	16,530	45,020	208
7	160	15,530	-	5,430	9,540	30,500	191
8	160	15,670	740	4,440	-	20,850	130
9	200	-	-	-	31,300	31,300	156
10	252	16,290	11,080	12,880	16,530	56,780	225
11	208	4,730	1,670	17,920	2,100	26,420	127
12	160	7,310	1,640	4,700	1,550	15,200	95
13	100	10,900	-	-	19,840	30,740	307
Total	2,096	129,830	34,940	52,950	123,600	341,200	
Av.Loss per Acre Bd.Ft.(Cruised)		62	17	25	59	163	
Estimated Loss per Acre Bd.Ft.		62	20	25	69	176	

UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Entomology And Plant Quarantine
Division of Forest Insect Investigations

FOREST INSECT SURVEYS

Lassen National Forest And Adjacent Private Lands

SEASON OF



LEGEND

Timber Types

- Eastside Pine
- Westside Pine
- Mixed Conifer
- Fir

Infestation

- Normal
- Light
- Moderate
- Heavy

Circulation

1. Regional Forester
2. State Forester
3. Orig. and Mailed
4. Collins Line Co.
5. Forest Supervisor
6. F.C.C.
7. Stall
8. File